TABLE 1. SUMMARY OF ENGINE TEST FACILITY INFORMATION

(Copy table as necessary)

Facility Name: _____

Engine test cell ID No.(s) (List each cell)	Maximum test cell capabilities[a]	Type of fuel(s) used[b]	Purpose of test cell[c]	Associated Stack ID No.[d]	Is pollution control equipment installed?, (Yes/No)[e]	Other than pollution control equipment, are process/operation methods used to minimize HAP emissions from engine testing?	
						Yes/No	If yes, please explain[f]

[a]Horsepower, thrust, kilowatts, megawatts, other (please specify)

[b]Gasoline, natural gas, diesel, dual fuels, other (please specify)

[c]Quality assurance (QA), research and development (R&D), new product testing, endurance testing, production, other (please specify)

[d]If multiple stacks, please list each

[e]If air pollution control equipment is installed, then Tables 4, 5 and 6 must be completed.

[f]Please use and attach a separate sheet if necessary

TABLE 2. SUMMARY OF ENGINE TESTING

(Copy table as necessary)

Facility name	Test Cell ID No.(s)[a]

Type of engine[b-d]	Typical end use of engine[e]	Typical engine tested		Fuel usage (1997)			Total number of individual engines tested (1997)[i]
		Size	Units[f]	Type[g]	Units[h]	Amount used in 1997[i]	

[a] Table 2 should be completed for each test cell identified in Table 1 unless reliable fuel information is available only for a group or groups of cells, in which case the columns in Table 2 should be completed for such group(s).

[b] Turbine, 2-stroke, 4-stroke, other (please specify)

[c] For natural gas fired reciprocating engines please specify: lean-burn, clean-burn, or rich burn

[d] For aircraft engines only, please indicate with "altitude" if engines were tested under altitude conditions

[e] Kilowatts, horsepower, thrust, other (please specify)

[f] Aircraft, power generation, locomotive, automobile, pipeline application, portable power, nonroad, lawn/garden equipment, other (please specify)

[g] Natural gas, gasoline, dual fuel, diesel, jet fuel, other (please specify)

[h] Cubic feet, gallons, other (please specify)

[i] If this number is not available, please provide an estimate

TABLE 3. HOURS OF OPERATION.
(Copy table as necessary)

Facility name: _____

The EPA is requesting information on the number of hours of engine operation in individual engine test cells. This information will give EPA a better understanding of the manner in which engine testing occurs. If hours of operation are available on an individual engine test cell basis, please provide this information below. Where this information is not available on an individual engine test cell basis, please provide the information on hours of operation for a number or group of cells or all engine test cells. Where this information is not readily available, please provide qualitative information in the space provided below that describes engine operating at test cells at your facility.

Cell ID. No.(s)	Hours of engine operation

Please explain, in general, engine testing operations at your facility:_____

TABLE 4. INFORMATION ON HAZARDOUS AIR POLLUTANTS--PREAIR POLLUTION CONTROL DEVICE STREAMS[a]
(Copy table as necessary)

Stack ID No.: _____

Name of HAP	Capture system/device	Capture efficiency, percent	Basis for reported efficiency[b]	HAP concentrations in captured stream, ppmv	Vent stream composition, volume percent	Flow rate of captured stream, scfm	Uncontrolled HAP emissions, tons/yr[c,d]

[a]Please provide information from actual test data, if available, or information from exiting HAP estimations, where avaiable.
[b]Provide copies of estimation worksheets and any other relevant documentation.
[c]Provide speciated data (if applicable).
[d]Emissions not captured plus those in the uncontrolled capture stream.

TABLE 5. INFORMATION ON HAZARDOUS AIR POLLUTANTS--CONTROLLED STREAMS[a]
(Copy table as necessary)

Stack ID No.: _____

Name of HAP	Control device/method	Control efficiency, percent	Basis for reported efficiency[b]	Control device outlet stream composition, volume percent[c]	Control device outlet stream HAP emissions tons/yr[c,d]

[a]Please provide information from actual test data, if available, or information from exiting HAP estimations.
[b]Provide copies of estimation worksheets and other relevant documentation.
[c]Include composition information for HAP's that are generated by the control device, if applicable.
[d]Provide speciated data (if applicable).

TABLE 6. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS[a]

CONTROL DEVICE: SCRUBBER	STACK ID _____		STACK ID _____		STACK ID _____	
Unit operations controlled (ID Nos.)						
Type of scrubber: spray quench, venturi, packed bed, impingement, or other (specify)						
Manufacturer and model number						
Year installed						
Exhaust gas flow at scrubber inlet, acfm @ °F	_____ acfm @ _____ °F		_____ acfm @ _____ °F		_____ acfm @ _____ °F	
Type of packing material						
Packing material depth, ft						
Pressure drop, in. H_2O						
Liquid-to-gas ratio, gal/10^3 acfm						
Permit-required parameter monitoring and monitoring frequency	Parameter	Frequency	Parameter	Frequency	Parameter	Frequency
Inlet scrubbing liquor source of liquor (e.g., pond water) pH percent solids type of alkali added, if any alkali addition rate, lb/gal						
Scrubber liquor recirculation rate, gal/min						
Blowdown generation rate, gal/min						
Actual pollutant removal efficiency (if known)[b] PM VOC HAP Other pollutant (specify)						
Frequency of packing material replacement (indicate if packing material replacement is partial or complete) Method of disposal						

[a]Please provide actual operating parameters; if not available, then specify that the parameter is a design parameter with the letter "D" (i.e., "10,000 acfm-D").
[b]Do not list vendor guaranteed pollutant removal efficiencies. List only information that is based on actual test data at your facility.

The information on this page is: **9** Nonconfidential **9** Partially confidential (please circle confidential responses)

TABLE 6. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS[a]

CONTROL DEVICE: INCINERATION	STACK ID _____		STACK ID _____		STACK ID _____	
Unit operations controlled (ID Nos.)						
Manufacturer and model number						
Year installed						
Particulate removal device preceding incineration device						
Type: thermal, catalytic or other (specify)						
Type of packing material (e.g., ceramic saddles, catalytic media, etc.)						
Number of canisters						
Inlet gas stream characteristics flow rate, acfm @ °F moisture content, percent (by volume)	_____ acfm @ _____ °F ___%		_____ acfm @ _____ °F ___%		_____ acfm @ _____ °F ___%	
Target combustion chamber temperature, EF (please note if temperature measurement is not in chamber)						
1997 annual fuel use: list fuel type and usage (provide units)						
System static pressure range, in. H_2O						
Nominal residence time, sec						
Permit-required parameter monitoring and monitoring frequency	Parameter	Frequency	Parameter	Frequency	Parameter	Frequency
Actual pollutant removal efficiency (if known)[b] PM VOC HAP Other pollutant (specify)						
Percent heat recovery (indicate percent recuperative and percent regenerative)						

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TABLE 6. (continued)

CONTROL DEVICE: INCINERATION	STACK ID _____	STACK ID _____	STACK ID _____
If NO_x controls are used, specify type (e.g., ammonia injection)			
Frequency of bakeouts			
Frequency of washouts			
Wastewater generated during wash outs, gal/yr			
Frequency of packing material replacement (indicate if packing replacement is partial or complete) and method of disposal			

[a]Please provide actual operating parameters; if not available, then specify that the parameter is a design parameter with the letter "D" (i.e., "10,000 acfm-D").
[b]Do not list vendor guaranteed pollutant removal efficiencies. List only information that is based on actual test data at your facility.

TABLE 6. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS[a]

CONTROL DEVICE: CYCLONES (excluding primary/product separation cyclones) AND MULTICLONES	STACK ID _____	STACK ID _____	STACK ID _____
Unit operations controlled (ID Nos.)			
Manufacturer and model number			
Year installed			
Number of tubes (enter 1 for cyclone)			
Tube diameter, in.			
Range of particle size entering control device, Fm			
Pressure drop, in. H_2O			
Exhaust gas flow at cyclone/multiclone inlet, acfm @ °F	_____ acfm @ _____ °F	_____ acfm @ _____ °F	_____ acfm @ _____ °F
Actual PM removal efficiency (if known)[b]			
Solid material collected (provide only if material not reused onsite), lb/yr End use/method of disposal			

[a]Please provide actual operating parameters; if not available, then specify that the parameter is a design parameter with the letter "D" (i.e., "10,000 acfm-D").
[b]Do not list vendor guaranteed pollutant removal efficiencies. List only information that is based on actual test data at your facility.

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TABLE 6. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS[a]

CONTROL DEVICE: OTHER CONTROL DEVICE (list important operating parameters and waste generation rate on the lines below)	STACK ID _____		STACK ID _____		STACK ID _____	
Unit operations controlled (ID Nos.)						
Manufacturer and model number						
Year installed						
Type of control device						
Exhaust gas flow at control device inlet, acfm @ °F	_____ acfm @ _____ °F		_____ acfm @ _____ °F		_____ acfm @ _____ °F	
Pressure drop, in. H_2O						
Actual pollutant removal efficiency (if)[b] PM VOC HAP Other pollutant (specify)						
Permit-required parameter monitoring and monitoring frequency	Parameter	Frequency	Parameter	Frequency	Parameter	Frequency

[a]Please provide actual operating parameters; if not available, then specify that the parameter is a design parameter with the letter "D" (i.e., "10,000 acfm-D").
[b]Do not list vendor guaranteed pollutant removal efficiencies. List only information that is based on actual test data at your facility.